

**C L A I M S :**

1. A method for the modulation of self-proteins so as to induce antibody response against such proteins following administration of said modulated self-proteins in the host of said self-proteins,  
5 which comprises providing a self-protein analog by molecular biological means by substitution of one or more peptide fragments of the self-protein by a corresponding number of peptides known to contain immunodominant foreign T-cell epitopes, said substitution being carried out so as to essentially preserve the overall tertiary structure of the original self-  
10 protein.
2. The method according to claim 1, wherein said immunodominant foreign T-cell epitope is inserted so as to preserve flanking regions from the original self-protein comprising at least 4 amino acids on either sides.  
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3. The method according to claim 1, wherein said T-cell epitope(s) comprise(s) at least 10 amino acids.  
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4. The method according to claim 3, wherein said T-cell epitope(s) comprise(s) at least 15 amino acids.  
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5. The method according to of claims 1, wherein the immunodominant T-cell epitope(s) originate(s) from tetanus toxoid or diphtheria toxoid.
6. An autovaccine against undesirable self-proteins in humans or animals, which comprises one or more self-proteins analogs modulated according to any of claims 1 - 4 and formulated with pharmaceutically acceptable adjuvants, such as calcium phosphate, saponin, quil A or biodegradable polymers.  
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7. The autovaccine according to claim 6, wherein the self-protein analog is present in the form of a fusion protein with suitable, immunologically active cytokines, such as GM-CSF or interleukin 2.

8. An autovaccine according to claim 6, which is a vaccine against TNF $\alpha$  or  $\gamma$ -interferon for the treatment of patients susceptible to cachexia, e.g. cancer patients.
9. An autovaccine according to claim 6, which is a vaccine against IgE for the treatment of patients with allergy.
10. An autovaccine according to claim 6, which is a vaccine against TNF $\alpha$ , TNF $\beta$  or interleukin 1 for the treatment of patients with chronic inflammatory diseases.
- 10 11. An autovaccine according to claim 10, which is a vaccine for treatment of patients with rheumatoid arthritis or inflammatory bowel disease.
12. An autovaccine according to claim 6 and 7, which is a vaccine against TNF $\alpha$  for the treatment of diabetes mellitus.

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